

WHAT IS CLAIMED IS:

1. A video camera apparatus comprising:

a solid state image sensor;

a video encoding section configured to perform  
5 compression encoding including intra-frame encoding and  
inter-frame encoding for a video signal input from said  
solid state image sensor;

a recording section configured to record the video  
signal compression-encoded by said video encoding  
10 section as a video file on a recording medium; and

a control section configured to execute a first  
motion video shooting and recording mode for obtaining  
a video file including the compression-encoded video  
signal to be transmitted in real time to a partner  
15 destination via a network, and to control said video  
encoding section to match a bit rate of an encoded  
video signal obtained by said video encoding section  
with a communication speed of the network used to  
transmit the video file when the first motion video  
20 shooting and recording mode is selected.

2. An apparatus according to claim 1, which  
further comprises:

a speech signal input section configured to input  
a speech signal;

25 a speech signal encoding section configured to  
perform compression encoding to the speech signal input  
from said speech signal input section; and

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a generation section configured to multiplex the speech signal compression-encoded by said speech signal encoding section and the compression-encoded video signal and generate the video file, and

5           said control section controls said speech signal encoding section to match a bit rate of an encoded speech signal obtained by said speech signal encoding section with the communication speed of the network used to transmit the video file when the first motion  
10 video shooting and recording mode is selected.

3. An apparatus according to claim 1, wherein said control section further is configured to execute a second motion video shooting and recording mode for recording an encoded signal having a higher bit rate  
15 than in the first motion video shooting and recording mode as a video file, and when the second motion video shooting and recording mode is selected, said control section is configured to control said video encoding section to set the bit rate of the encoded video signal  
20 obtained by said video encoding section to be higher than in the first motion video shooting and recording mode.

4. An apparatus according to claim 1, further comprising an option selection section configured to  
25 select an encoding option to be executed by said video encoding section,

said option selection section comprising:

a detection section configured to detect an encoding delay by said video encoding section, and

an omission section configured to switch encoding by said video encoding section to intra-frame encoding, and to cause said video encoding section to omit inter-frame encoding when the encoding delay is detected.

5. An apparatus according to claim 1, further comprising an option selection section configured to select an encoding option to be executed by said video encoding section,

said option selection section comprising:

a determination section configured to determine whether a motion vector size obtained by encoding of said video encoding section is larger than a predetermined value; and

an omission section configured to switch encoding by said video encoding section to intra-frame encoding, and to cause said video encoding section to omit inter-frame encoding when the motion vector size is larger than the predetermined value.

6. An apparatus according to claim 1, further comprising:

a hand blurring detection section configured to detect hand blurring of said video camera apparatus; and

an option selection section configured to select an encoding option to be executed by said video

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encoding section,

said option selection section comprising an omission section configured to switch encoding by said video encoding section to intra-frame encoding, and to  
5 cause said video encoding section to omit inter-frame encoding when an amount of hand blurring detected by said hand blurring detection section is larger than a predetermined value.

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10 7. An apparatus according to claim 1, further comprising:

an interval shot mode section configured to execute an interval shot mode in which one frame or a plurality of successive frames are repetitively shot after a predetermined interval time, and

15 an omission section configured to switch encoding of said video encoding section which receives one frame or a plurality of successive frames after the predetermined interval time, to intra-frame encoding in the interval shot mode, and to cause said video  
20 encoding section to omit inter-frame encoding.

8. An apparatus according to claim 1, further comprising:

an interval shot mode section configured to execute an interval shot mode in which one frame or  
25 a plurality of successive frames are repetitively shot after a predetermined interval time, and

a displacement section configured to displace, by

another virtual value, a time stamp value of each frame added to the compression-encoded video signal recorded as the video file in the interval shot mode.

5 9. An apparatus according to claim 1, further comprising:

a speech signal input section configured to input a speech signal;

10 a speech signal encoding section configured to perform compression encoding for the speech signal input from said speech signal input section;

15 a multiplexing section configured to multiplex the compression-encoded speech signal onto the compression-encoded video signal to record the speech signal compression-encoded by said speech signal encoding section together with the compression-encoded video signal as a video file; and

20 a speech recording section configured to execute a speech recording mode in which only a speech signal is recorded, and to set said solid state image sensor and said video encoding section in an OFF or standby state in the speech recording mode.

25 10. An apparatus according to claim 9, further comprising a control section configured to control switching to the speech recording mode on the basis of a residual capacity of the recording medium or a battery residual capacity of said video camera apparatus.

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11. An apparatus according to claim 1, further comprising an index image generation section configured to generate an index image of the video signal recorded as the video file on the basis of a predetermined  
5 1-frame image signal obtained from said solid state image sensor, and record the index image on the recording medium.

12. An apparatus according to claim 11, wherein said index image generation section generates an index  
10 image including the predetermined one-frame image and a reduced image of the predetermined one-frame image.

13. An apparatus according to claim 11, wherein the predetermined one-frame image includes a first one-frame image at start of video shooting.

14. An apparatus according to claim 1, further comprising:  
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a communication interface configured to connect said video camera apparatus to an information processing device;

20 a recognition section configured to cause said information processing device to recognize said video camera apparatus as a storage device when said video camera apparatus is connected to said information processing device via said communication interface; and

25 a control section configured to control said recording medium of said video camera apparatus in accordance with an access request from the information

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processing device to the storage device.

15. An apparatus according to claim 14, wherein  
said recording medium includes an internal storage  
device built into said video camera apparatus, or  
5 an external storage device detachably mounted in said  
video camera apparatus.

16. An apparatus according to claim 15, further  
comprising:

10 a detection section configured to detect whether  
said external storage device is mounted; and

a switching section configured to switch a  
recording medium used as a recording destination of the  
video file and a recording medium used as the storage  
device by the information processing device, from the  
15 internal storage device to the external storage device  
when the external storage device is mounted.

17. A video camera apparatus comprising:

a solid state image sensor;

20 a video encoding section configured to perform  
compression encoding including intra-frame encoding and  
inter-frame encoding for a video signal input from said  
solid state image sensor;

a recording section configured to record the video  
signal compression-encoded by said video encoding  
25 section as a video file on a recording medium; and

a control section configured to control a compres-  
sion ratio of the video signal obtained by said video

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encoding section in accordance with an application purpose of the video file, to execute selectively a first motion video shooting and recording mode for obtaining a video file including the compression-  
5 encoded video signal to be transmitted in real time to a partner destination via a network, and a second motion video shooting and recording mode for recording an encoded video signal having a higher bit rate than in the first motion video shooting and recording mode  
10 as a video file, and to set a target bit rate of the encoded signal with respect to said video encoding section in accordance with a selected one of the first and second motion video shooting and recording modes.

18. A video camera apparatus comprising:

15 a solid state image sensor;

a video encoding section configured to perform compression encoding including intra-frame encoding and inter-frame encoding for a video signal input from said solid state image sensor;

20 a recording section configured to record the video signal compression-encoded by said video encoding section as a video file on a recording medium; and

a displacement section configured to execute an interval shot mode in which one frame or a plurality  
25 of successive frames are repetitively shot after a predetermined interval time, and to displace, by another virtual value, a time stamp value of each frame

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added to the compression-encoded video signal recorded as the video file in the interval shot mode.

19. A video camera apparatus which can selectively use an internal storage device and a detachably mountable external storage device as a recording medium, comprising:

a solid state image sensor;

a video encoding section configured to perform compression encoding including intra-frame encoding and inter-frame encoding for a video signal input from said solid state image sensor;

a recording section configured to record the video signal compression-encoded by said video encoding section as a video file in an internal or external storage device;

an external storage device detection section configured to detect whether the external storage device is mounted;

a variable setting section configured to variably set a target bit rate value of an encoded signal designated to said video encoding section on the basis of a detection result by said external storage device detection section to obtain a video file having higher quality when the external storage device is mounted than quality when the external storage device is not mounted.

20. A video camera apparatus comprising:

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a solid state image sensor;

a video encoding section configured to perform  
compression encoding including intra-frame encoding and  
inter-frame encoding for a video signal input from said  
5 solid state image sensor;

a recording section configured to record the video  
signal compression-encoded by said video encoding  
section as a video file on a recording medium; and

an option selection section configured to select  
10 an encoding option to be executed by said video  
encoding section,

said option selection section including:

a detection section configured to detect an  
encoding delay by said video encoding section; and

15 a control section configured to control the  
encoding option by said video encoding section to  
realize encoding at a designated target frame rate when  
the encoding delay is detected.

21. A video camera apparatus comprising:

20 a solid state image sensor;

a video encoding section configured to perform  
compression encoding including intra-frame encoding and  
inter-frame encoding for a video signal input from said  
solid state image sensor;

25 a recording section configured to record the video  
signal compression-encoded by said video encoding  
section as a video file on a recording medium; and

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an option selection section configured to select an encoding option to be executed by said video encoding section,

said option selection section including:

5        a determination section configured to determine whether a motion vector size obtained by encoding of said video encoding section is larger than a predetermined value; and

10        an omission section configured to switch encoding by said video encoding section to intra-frame encoding, and to cause said video encoding section to omit inter-frame encoding when the motion vector size is larger than the predetermined value.

22. A video camera apparatus comprising:

15        a solid state image sensor;

      a video encoding section configured to perform compression encoding including intra-frame encoding and inter-frame encoding for a video signal input from said solid state image sensor;

20        a recording section configured to record the video signal compression-encoded by said video encoding section as a video file on a recording medium;

      a hand blurring detection section configured to detect hand blurring; and

25        an option selection section configured to select an encoding option to be executed by said video encoding section,

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said option selection section including:

an omission section configured to switch encoding by said video encoding section to intra-frame encoding, and to cause said video encoding section to omit inter-frame encoding when an amount of hand blurring detected by said hand blurring detection section is larger than a predetermined value.

23. A video camera apparatus comprising:

a solid state image sensor;

a video encoding section configured to perform compression encoding including intra-frame encoding and inter-frame encoding for a video signal input from said solid state image sensor;

a recording section configured to record the video signal compression-encoded by said video encoding section as a video file on a recording medium;

a speech signal input section configured to input a speech signal;

a speech signal encoding section configured to perform compression encoding for the speech signal input from said speech signal input section;

a multiplexing section configured to multiplex the compression-encoded speech signal onto the compression-encoded video signal to record the speech signal compression-encoded by said speech signal encoding section together with the compression-encoded video signal as a video file; and

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a speech recording mode section configured to execute a speech recording mode in which only a speech signal is recorded, and to set said solid state image sensor and said video encoding section in an OFF or standby state in the speech recording mode.

24. A video camera apparatus comprising:

a solid state image sensor;

a video encoding section configured to perform compression encoding including intra-frame encoding and inter-frame encoding for a video signal input from said solid state image sensor;

a recording section configured to record the video signal compression-encoded by said video encoding section as a video file on a recording medium;

a communication interface configured to connect said video camera apparatus to an information processing device;

a recognition section configured to cause the information processing device to recognize said video camera apparatus as a storage device when said video camera apparatus is connected to the information processing device via said communication interface; and

a control section configured to control the recording medium of said video camera apparatus in accordance with an access request from the information processing device to the storage device.

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